

CLAIMS

What is claimed is:

1. A system comprising:
a plurality of components;
a first component in the plurality of components having a universal
5 contextual interface, the universal contextual interface associated with at least one
instruction for transferring contextual data; and
a second component in the plurality of components that invokes the
universal contextual interface to execute the at least one instruction to transfer the
contextual data between the first component and at least one of the plurality of
10 components, the plurality of components having no prior knowledge of each
other.
2. The system as set forth in claim 1 wherein the at least one of the
plurality of components comprises the second component.
- 15 3. The system as set forth in claim 1 wherein the first component
sends a context object to the second component to be used by the second
component to transfer the contextual data.
- 20 4. The system as set forth in claim 1 wherein the second component
receives a context object from the first component to be used by the at least one of
the plurality of components for receiving contextual data transmitted from the
first component.
- 25 5. The system as set forth in claim 1 wherein the at least one of the
plurality of components uses the contextual data as a criteria to authorize the first
component or the second component to access instructions, data or operations
associated with the at least one of the plurality of components.
- 30 6. The system as set forth in claim 1 wherein the universal contextual
interface or a context object have source-specific, object-oriented mobile code

that can be understood and performed by the at least one of the plurality of components to receive contextual data.

5 7. The system as set forth in claim 1 wherein the plurality of components comprise at least one device, at least one software application or at least one file.

10 8. The system as set forth in claim 1 wherein the first component further comprises a historical database having at least one record of data provided by the second component during invocation of the universal contextual interface.

15 9. The system as set forth in claim 1 wherein the second component invokes a universal notification interface to register the at least one of the plurality of components to receive an event notification each time the contextual data changes.

20 10. The system as set forth in claim 1 wherein the contextual data comprises executable computer language instructions, or a type, operating status, identity, location, administrative domain or environment information of at least one of the plurality of components.

 11. A method for providing context information, the method comprising:
25 invoking a universal contextual interface associated with a first component in a plurality of components, the contextual interface associated with at least one instruction for transferring contextual data; and
 executing the at least one instruction to transfer the contextual data between the first component and a second component in the plurality of components, the plurality of components having no prior knowledge of each
30 other.

12. The method as set forth in claim 11 wherein the second component or a third component in the plurality of components perform the invoking and executing.

5 13. The method as set forth in claim 11 further comprising sending a context object to the at least one of the plurality of components to be used for transferring the contextual data.

10 14. The method as set forth in claim 11 further comprising using the contextual data as a criteria to authorize the second component to access instructions, data or operations associated with the one of the plurality of components.

15 15. The method as set forth in claim 11 wherein the universal contextual interface or a context object have source-specific, object-oriented mobile code that can be interpreted and performed by the first component or the at least one of the plurality of components to receive contextual data.

20 16. The method as set forth in claim 11 wherein the plurality of components comprise at least one device, at least one software application or at least one file.

25 17. The method as set forth in claim 11 further comprising storing in a historical database at least one record of data provided during invocation of the universal contextual interface.

30 18. The method as set forth in claim 11 further comprising invoking a universal notification interface to register the at least one of the plurality of components to receive an event notification each time the contextual data changes.

19. The method as set forth in claim 11 wherein the contextual data comprises executable computer programming language instructions or a type,

operating status, identity, location, administrative domain or environment information of at least one of the components or of at least one user of the plurality of components.

5 20. A computer readable medium having stored thereon instructions for providing context information, which when executed by at least one processor, causes the processor to perform:

invoking a universal contextual interface associated with a first component in a plurality of components, the contextual interface associated with at least one instruction for transferring contextual data; and

10

executing the at least one instruction to transfer the contextual data between the first component and a second component in the plurality of components, the plurality of components having no prior knowledge of each other.

15 21. The medium as set forth in claim 20 wherein the second component or a third component in the plurality of components perform the invoking and executing.

20 22. The medium as set forth in claim 20 further comprising sending a context object to the at least one of the plurality of components to be used for transferring the contextual data.

25 23. The medium as set forth in claim 20 further comprising using the contextual data as a criteria to authorize the second component to access instructions, data or operations associated with the one of the plurality of components.

30 24. The medium as set forth in claim 20 wherein the universal contextual interface or a context object have source-specific, object-oriented mobile code that can be interpreted and performed by the first component or the at least one of the plurality of components to receive contextual data.

25. The medium as set forth in claim 20 wherein the plurality of components comprise at least one device, at least one software application or at least one file.

5 26. The medium as set forth in claim 20 further comprising storing in a historical database at least one record of data provided during invocation of the universal contextual interface.

10 27. The medium as set forth in claim 20 further comprising invoking a universal notification interface to register the at least one of the plurality of components to receive an event notification each time the contextual data changes.

28. The medium as set forth in claim 20 wherein the contextual data comprises executable computer programming language instructions or a type, operating status, identity, location, administrative domain or environment information of at least one of the components or of at least one user of the plurality of components.